APPENDIX K
METHODS

An inter-program/inter-regional steering committee was established within the Department of Fish and Wildlife (WDFW) to guide implementation of the project. A representative was included from the SSHIAP to promote consistency and assist in adding additional information to their database. As well, Task Leaders were also identified to provide guidance on issues.

State and federal agencies, tribes, local government, industry, academia, and non-profit organizations all have information and data on salmonid habitat. Information of three types was sought through the WRIP: narrative (reports and papers), tabular (databases and spreadsheets) and spatial (geographic information data layers). Several data inventory projects have been prepared in recent years (Appendix B). These lists, phone contact with data managers in a variety of natural resource agencies and organizations, and searches on the Internet provided information on existing databases and sources.

Watershed Recovery Inventory Project
Participants

Project Lead:	Leni Oman
GIS Lead:	Terry Johnson
<u>Steering Committee</u>	
Habitat Management	Leni Oman
Fish Management	Steve Leider, Greg Volkhardt
Hatcheries	Andy Appleby
Lands and Restoration	Rocky Beach, Paul Dahmer
Wildlife Management	Jim Eby
Enforcement	Tony de la Torre, Bob Zak
Outreach and Education	Kent Dimmit
Management Services	Mary Ellen Bradley
SSHIAP	Randy McIntosh
<u>Regional Liaisons</u>	
Region 1	Kevin Robinette
Region 2	Ken Williams
Region 3	Brent Renfrow
Region 4	Ted Muller
Region 5	Brian Cowan
Region 6	Dick Stone
Region 7	Tim Flint
<u>Task Leaders</u>	
Watershed Assessments	Steve Keller
Ready-to-Fund Projects	Kevin Bauersfeld, Lynn Palensky
Monitoring Projects	Leni Oman
Fish Barrier Identification	Paul Sekulich
Water Quality	Carl Samuelson
Water Quantity	Hal Beecher
Flooding & Sedimentation	Dan Guy
Fish Supplementation	Bruce Sanford
Completed Restoration	Kevin Bauersfeld, Lynn Palensky
Prioritization	Leni Oman

Mapping Workshops

The information on existing databases revealed gaps in information, particularly spatial data on habitat condition. While a significant amount of geographic information is available on water quality, little exists on stream channel complexity or low and high stream flow. As well, fish passage barrier information is incomplete. To fill a portion of these information gaps agency biologists were asked to participate in mapping workshops. Eight workshops were held throughout the state: Spokane, Yakima, Wenatchee, Vancouver, Montesano, Mill Creek, Sedro Wooley, and Olympia. One hundred forty five employees, tribal representatives, and other organizations participated in the mapping workshops.

Participants were asked to map fish passage barriers, high and low stream flow

problems, areas where mass wasting or excessive sedimentation occur, areas where the stream is no longer connected to the flood plain, and restoration and protection priorities. They were asked to record only information they were directly familiar with and in which they were confident. No effort was made to differentiate between natural or human caused mass wasting events. This should be considered when determining appropriate recovery actions.

The information collected was recorded on a tally sheet for each WRIA. Data should be considered draft until they can be verified by field staff. The mapping guidelines for these workshops are in Appendix C.

Mapping was conducted at a scale of 1:100,000 so information can be added to a hydrology layer that has been routed. Routing is important because it allows stream data to be analyzed as a continuous flowing water body rather than cutting the stream arbitrarily at township borders. Routing establishes a direction of flow, matches up stream corridors at the edges of township tiles and recognizes stream systems. The only routed statewide hydrology layer at this time is in the StreamNet system at 1:100,000. This is a relatively coarse scale of resolution that will allow us to take a qualitative look at the problems within a watershed. However, the coarseness of the scale also limits information on habitat conditions for species such as coho and bull trout that prefer smaller tributaries.

Information for the Lewis Kalama watershed (WRIA 27) was entered into a GIS data layer (see ***Map Products***, page x). These maps provide an example of the relationships that may exist between habitat conditions and fish distribution. Information collected for other WRIAs is currently in tabular format but will be mapped as staff time allows.

Surveys

In addition to the mapping workshops, information was collected through three surveys: the contact survey, the data directory survey and the site specific information survey. Organizations contacted are identified in Appendix D.

Contact Survey

One hundred fifty (150) surveys requesting contact information were distributed to state and federal natural resource agencies, tribes, Regional Fisheries Enhancement Groups, major landowners, conservation districts, county planners, and a limited number of environmental organizations. Eighteen responses were received identifying 62 contacts.

Database Survey

Several database surveys have been conducted in recent years. When possible, this information was used to identify salmonid habitat information. In addition, a request

was made to agency programs and external organizations to provide information on databases in a standardized Quattro Pro spreadsheet.

Information Survey

A standardized Quattro Pro survey form was sent out to all agency employees with email, all WDFW land managers, all Washington tribes, and 62 individuals who were identified through the contact survey.

The WRIP asked for information on a number of different tasks ranging from completed and planned restoration projects to impaired site function (Table 1). In order to capture as much information as possible on these diverse requests, a survey form was developed and circulated to 940 agency employees and the 62 individuals identified in the contact survey. Twenty-one responses were received. The survey was circulated in a spreadsheet format developed in Quattro Pro. Conversions to other software were made at the request of the respondent.

Watershed Assessments Title Author Date Issues Addressed Type of Plan Funding Source Status **Restoration** Project Title Description Date Status Objective Cost Funding Source **Monitoring** Project Title Description Date Started Status Date Frequency Funding Source Cost	**Fish Barriers** Name of Facility/Road Crossing Description of Problem Description of Correction Range of Construction Costs **Water Quality** Parameter Suspected source **Stream Flow** Problem Months of Limitation Duration Frequency Suspected Cause **Sedimentation** Description of Problem Magnitude Description of Correction Cost

Table 1. Information Survey Parameters

Each record of information was recorded by WRIA, watershed administrative unit (WAU), and stream name. Contact information for each record was also collected.